List of TAP/RAP topics

Name	Project Title	Specialisation
Prof. Shiladri Chakraborty	Multi-functional wireless charger for LEVs with minimal on-board power electronics	EE3
Prof. Shiladri Chakraborty	Unified power electronic interface (UPEI) for Electric Vehicles	EE3
Prof. Shiladri Chakraborty	Design and Development of 11kV Medium - Voltage SiC based DC Fast Charger	EE3
Prof. Anil M. Kulkarni	Stability analysis and Controller Design of IBRs using Frequency Scanning Techniques	EE3
Prof. Ashwin A.Seshia	Reliability Physics of Vibrating and Impacting Nonlinear Microelectromechanical Devices	EE5, EE7
Prof. Bhaskaran M.	2D-Optoelectronic quantum technologies	EE7
Prof. Bhaskaran M.	Photodetector device modelling for space applications	EE7
Prof. Chetupalli Srikanth Raj	Robust Target Speaker Extraction for Speech Communication Applications	EE1
Prof. Debidas Kundu	High-efficiency Power Amplifier Design	EE1
Prof. Debidas Kundu	Design and Development of Space-Time Coding Metasurface for Harmonic Beamforming Applications	EE1
Prof. Dipankar Saha	Single Photon Source and etector	EE 7
Prof. Gaurav Kasbekar	Resource Optimization in Space-Air-Ground Integrated Networks	EE 1
Prof. Kasturi Saha	Design and development of quantum gyroscope	EE5, EE6, EE7
Prof. Parthib Khound	Design and Development of Cooperative Adaptive Cruise Control under a Stochastic Framework	EE2
Prof. Rahul Singh	Analog/RF/Mixed-Signal IC Design for Readout Circuits Interfacing with Quantum Systems	EE5, EE6
Prof. Rohit Parasnis	Incentives, Dynamic Networks, and AI for Real-World Systems	EE1, EE2

Name	Project Title	Specialisation
Prof. S. Lodha	Wafer-scale Emitter and Detector Arrays for Visible Wavelength Room Temperature Photonic Quantum Technologies	EE6, EE7
Prof. S.P. Duttagupta	Digital Twin Models and Implementation for Micro Modular Nuclear Reactor	EE1, EE2, EE3, EE5, EE7
Prof. Sandip Mondal	FPGA-Based Characterization of Oxide-Based RRAM for Neuromorphic Computing and AI Hardware	EE1, EE5, EE6, EE7
Prof. Sandip Mondal	High Speed CV system for Semiconductor Memories for Next-Generation AI Hardware	EE1, EE2, EE3, EE5, EE6, EE7
Prof. Sandip Mondal	Flexible Non-Volatile Memory	EE1, EE2, EE3, EE5, EE6, EE7
Prof. Sandip Mondal	Digital Characterization and Reliability Analysis of Advanced NAND Flash Memory	EE1, EE2, EE3, EE5, EE6, EE7
Prof. Shalabh Gupta	Optical Transceiver Chipset for High-Bandwidth 6G Wireless Links	EE1, EE5, EE6, EE7
Prof. Siddharth Tallur	Miniaturized quantum sensor systems	EE5, EE6, EE7
Prof. Siddharth Tallur	Low-noise and high-stability electronic systems for quantum sensors	EE1, EE5, EE6
Prof. Sudip Nag	Bio-resorbable neural implants	EE5, EE6, EE7
Prof. Sudip Nag	IoT systems for structural health monitoring of off-shore wind turbines	EE5, EE6, EE7
Prof. Sudip Nag	Engergy harvesting for neural implants	EE5, EE6, EE7
Prof. Sudip Nag	Intelligent Neural Stimulator for Fully Implantable Prostheses	EE5, EE6, EE7
Prof. V. Saravanan	Design and Development of a Consent Management Platform for DPDP Act	EE1, EE5
Prof. Anshuman Shukla	Development of Novel Energy Efficient, Compact, and Scalable Power Electronics Systems for Solar Power Plants	EE3